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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/722,936

11/26/2003

Young-Yong Kim

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EXAMINER

VIANA DI PRISCO, GERMAN

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

06/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/722,936	Applicant(s) KIM ET AL.	
	Examiner GERMAN VIANA DI PRISCO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/03/2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. ("Yoshimura", United States Patent Application Publication No.: US 2002/0126675 A1) in view of Chen (United States Patent Application Publication No.: US 2007/0076723 A1) and further in view of Hoglund et al. ("Hoglund", United States Patent Application Publication No.: US 2004/0152422 A1)

Consider claims 1 and 4, Yoshimura clearly shows and discloses a traffic scheduling apparatus and method for a base station in a mobile communication system, for transmitting real-time traffic and non-real-time traffic having different QoS (Quality of Service) to a particular mobile station, the apparatus comprising a delay adjuster (classifying part 301 in figure 3) for determining transmission order so that the real-time traffic is transmitted preferentially over the non-real-time traffic (paragraphs [0008] and [0059]); a transmission buffer (IP queue 302 in figure 3) for receiving and storing the real-time traffic and non-real-time traffic output in the transmission order determined by the delay adjuster (paragraph [0060]).

However, Yoshimura does not specifically teach a rate adjuster for calculating assigned power of a time slot serving as a transmission unit for transmitting a

predetermined amount of traffic stored in the transmission buffer, changing the transmission order of the traffic according to available power of the time slot, and packing the traffic in the time slot according to the changed transmission order.

In the same field of endeavor Chen discloses calculating assigned power (the base station considers the amount of transmit power needed to satisfy the forward link demands, paragraphs [0042] and [0043]) of a time slot (transmission intervals or frames, paragraph [0036] and figure 5) serving as a transmission unit for transmitting a predetermined amount of traffic stored in the transmission buffer (paragraphs [0071] and [0072]), changing the transmission order of the traffic according to available power of the time slot , and packing the traffic in the time slot according to the changed transmission order (paragraphs [0084] and [0089]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to calculate assigned power of a time slot serving as a transmission unit for transmitting a predetermined amount of traffic stored in the transmission buffer, change the transmission order of the traffic according to available time slot power, and pack the traffic in the time slot according to the changed transmission order as disclosed by Chen in the system of Yoshimura et al. in order to efficiently schedule resources and accommodate different types of services.

Even though Yoshimura as modified by Chen discloses classifying IP packets into different queues on the basis of the Quality of Service requirements (paragraph [0059]), Yoshimura as modified by Chen does not specifically disclose that the delay

adjuster determines transmission order based on a ratio of real-time traffic to total traffic arrived at each session. But it is well known in the art that real-time traffic is delay-sensitive and resources are allocated in order to minimize such delay. Consider Hoglund, this reference discloses apportioning transmission resources based on the ratio of expected real-time traffic to the total traffic that can be handled (paragraph [0027]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apportion resources based on a ratio of real-time traffic as disclosed by Hoglund in the apparatus of as modified by Chen in order to efficiently schedule resources and accommodate different types of services.

Allowable Subject Matter

6. Claim 2 as applied to claim 1 above, claim 3 as applied to claim 2 and claim 5 as applied to claim 4 above are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 6 is allowed.

Response to Arguments

8. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Therefore the Examiner maintains the same grounds of rejection.

Conclusion

9. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERMAN VIANA DI PRISCO whose telephone number is (571)270-1781. The examiner can normally be reached on Monday through Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/German Viana Di Prisco/
Examiner, Art Unit 2617
May 30, 2008

/Duc Nguyen/
Supervisory Patent Examiner, Art Unit 2617